

SINCLAIR/TIMEX USERS MAGAZINE

Volume II

SEPTEMBER 1984

Number 9

Inside...

Spectrum Emulator Revisited

TMK Color Monitor

Expanding UDG's

ZX/TS Repair Guide —Part I

Horace Goes Skiing!

Vendor Reports

Users Group News

Classified Ads

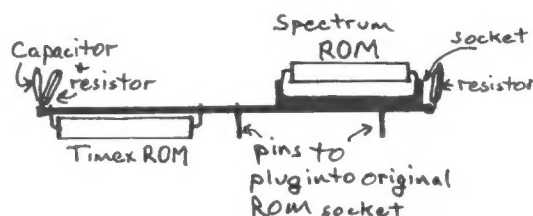
...and more!

Spectrum Emulator Revisited

In last month's article, we inadvertently left out the printed circuit board layout, so here it is this month with our apologies. Also I have drawn a side view showing how the chips sit on the board.

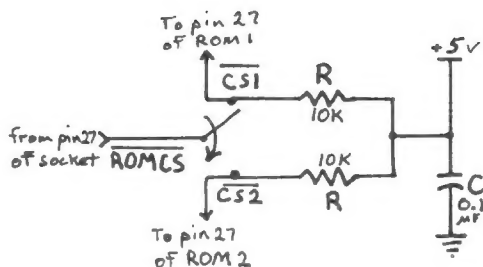
When installing the chips, always use great care in positioning the chips in the sockets. Generally, the width between the two rows of pins are wider than the socket spacing. To narrow the spacing, hold the chip with both hands, fingers holding top and bottom and press one of the rows of pins on their side onto a hard surface with the pins still in the protective foam. Carefully bend in both sides slightly until the chip is easier to fit into the socket. The outward bend of the pins help "force" a good connection to the socket, so don't over do it.

The foam is there to protect the chip from static discharges. Keep the chip in the foam as long as possible. Remember, the drier your climate, the more chance you have of



Front view of completed circuit board with both ROMs mounted.

...continued on next page



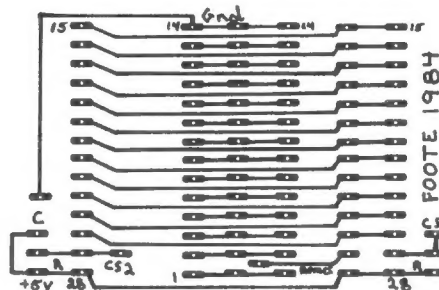
Schematic of Spectrum Emulator

static damage. Don't forget to protect the chips you take out such as the 2068 ROM. Your best bet is to stick it in the other side of the foam your new ROM is in. Also remember that in any work you do with any of your computers, you are working with static sensitive components; so be careful.

More software that we now know to work on the 2068 with the Spectrum ROM enabled include:

Tutankhamun
Teradacktil

Penetrator
Advanced Graphics
Chopper Rescue
Voice Chess
ETX
Code Name Mat
Groucho



Printed circuit layout for Spectrum Emulator.

Sometimes the Spectrum ROM has a hard time initializing. You can tell from the start if it will or won't. If the screen BORDER initializes white then no problem should occur. If the BORDER initializes black, go ahead and turn off the computer and try again. For me, it has trouble initializing about 20% of the time.

--Joe Williamson

SUM

SINCLAIR/TIMEX USERS MAGAZINE

c/o 3224 NW 30th Avenue
Gainesville, Florida 32605

EDITOR Joe Williamson
PUBLISHER Richard Cravy

CONTRIBUTING EDITORS

Al Mollitor John Monkus

SUBSCRIPTION RATES

Regular Subscription\$12.00/year
Trial Subscription \$6.00/6 months
Published once a month

ADVERTISING RATES

Full Page \$50
Half Page \$30
Quarter Page \$20
Eighth Page \$12

We do not do artwork or ad layouts. Advertisers must supply their own.

CLASSIFIEDS

\$2.00 per line, standard characters only, 35 characters per line. Free personal ads for subscribers (no dealers).

SUM-WARE

TS 2068 \$139⁹⁵
AlphaCom 32 Printer \$69⁹⁵
Timex Modem (2050) \$109⁹⁵
Zebra Light Pen \$27⁹⁵
Timex 2020 Recorder \$39⁹⁵
Timex 2090 Command Stick \$11⁹⁵
Cartridges: Flight Simulator or Pinball \$29⁹⁵
Casino I \$22⁹⁵

810 Mammott Rd., Alden, NY 14004

Add 5% Shipping C.O.D. OK Catalog—\$1.00

716/547-2273

TMK Color Monitor

The TMK monitor/TV (model #201b) is a low resolution 9" monitor and TV combination. The unit stands 13" by 10" wide and 13" deep. A set of switches on the front allow adjustments for contrast, brightness, color and tint, as well as auto-color and TV/monitor switching. It contains a turret style tuner for VHF and UHF stations. The rear has inputs for the tuner and separate audio/video jacks both in and out.

Using the monitor mode, the picture quality is excellent and even Tasword shows up quite well in 64 column mode when you turn down the color. While in the TV mode, the picture is degraded only slightly and still gives sharp characters.

The price is in the \$280-\$300 range and available at K-Mart and Skipper Electronics. Better quality color monitors are available at higher prices, but considering the price and picture quality, I would say that it is an excellent choice.

-- Joe Williamson

What To Do With That Computer

A common question asked owners of home computers is, "What can you do with that thing?" Many of us might answer "play games", "word processing", or "keep track of finances". Many of us probably leave the answer at that, purposely vague. The fact is, many home computers gather dust more than they process information.

While I admit that my own Timex 1000 sits idle much of the time, I do have at least one regular use for it. About once a month, after all my bank statements, credit card bills, and other information arrives in the mail, I use the computer to update an approximation of my net worth. To do this I use Vu-Calc. I have set up several columns, each for a type of

asset or liability, such as "short-term savings" or "long-term liabilities". Each row in each column is assigned to a particular savings account, loan, or item of real property. Each month, all I have to do is update current values or balances. The final column is used to summarize all the other columns by instantly calculating "total assets", "total liabilities" and the difference between the two: "net worth" (never as large as one would hope). As soon as I find a TS 2040 printer, I will make a hard copy each month to keep track of long-term trends.

This is just one example of how a Timex computer can be used to make everyday life a little easier and more interesting. It would be interesting to hear how other TUG members answer the question: "What do you use that thing for, anyway?"

-- Al Mollitor

W M J Data Systems

DEDUCT 10% ON PURCHASE
OF 2 OR MORE SOFTWARE
PACKAGES.

USER GROUP MEMBERS
DEDUCT 10%.

TS2068 SOFTWARE

The following programs all use a machine code generated spreadsheet format that makes them fast and reliable. It is suggested that a printer be used with the programs, but one is not required. For complete details on these programs please refer to the TS1000 section of this price list.

TAX RETURN ORGANIZER 2000	\$20.00
CHECKREC 2000	\$12.00
STOCK WATCH 2000	\$12.00
APPOINTMENT WATCH 2000	\$12.00
ADDRESS BOOK 2000	\$12.00
HOUSEHOLD INVENTORY 2000	\$12.00

TEXTWRITER 2000 by R. Fingerle \$18.95

A high capacity full color word processing program for the TS2068 and TS2040 printer. It is similar in design to the TEXTWRITER 1000, which has received excellent reviews in computer publications. The TW2000 includes all of the features of the TS2068; repeating keys, upper and lower case, audible prompts, fast text loading and saving, and a text capacity of 840 lines or about 450 words.

TEXTWRITER 2000 PLUS \$24.95

A program similar to the TEXTWRITER 2000 program above, but for use with the TS2068 and the ARC0 Centronics interface.

THE GREAT GRAPHICS SHOW \$24.95

This package written by J. A. Coffey contains six excellent programs that will show off your TS2068 computer. Programs include: The Great Graphics Show, Touch Type Learning Package, Three James Package, Hi-Res Lander, Oscilloscope, and Easy Editor. This package was rated 5 out of 4 by the Triangle Sinclair User's Group, 4/84 newsletter.

BLANK CASSETTES

Computer quality C-20 length (10 minutes per side) with plastic case and blank labels.

10 for \$9.50 25 for \$18.00

We pay postage.

4 BUTTERFLY DRIVE

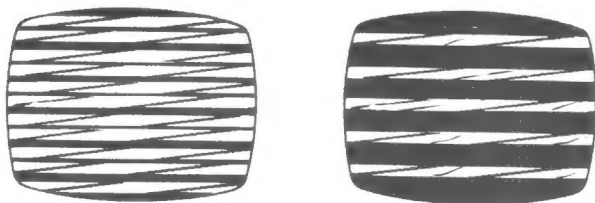
HAUPPAUGE, NEW YORK 11788

ZX/TS Repair Guide — Part I

This begins a series of articles on how to repair the problems that spring up with your ZX81 and TS1000. Sending off to have your computer repaired can cost as much as--if not more than--the original cost of the computer. The majority of the problems can be fixed by the average owner.

The first problem that I will cover is LOADING and SAVEing. If the computer works otherwise, 99% of LOADING/SAVEing problems lie in the cassette recorder you are using. The ZX/TS machines have one of the poorest (and slowest) ways of loading a program. You have no idea whether the program is actually loading or just passing what it thinks is garbage.

Most problems are caused by not having the proper volume setting while loading. One of the best ways of telling whether the program is loading or not is by watching the TV screen. The proper volume setting can be determined by watching the black and white lines on the screen during the more "steady scenes". The black lines should be slightly thicker than the white lines in between. On some sets with bad linearity, the lines may appear to get thinner towards the bottom of the screen (the display appears to be smaller towards the bottom as well). On these sets, try to watch the top few lines to make the black lines thicker than the white ones. That should give you proper volume for loading (typically around 3/4 of maximum volume).



Left screen shows volume too low; right screen shows correct volume.

The type of recorder is very important. Use only a standard type monaural recorder. Don't use stereo portables, home type units or micro-cassettes, they probably will not work. Your best bet is to use a good quality desk-top recorder which includes a tone control, tape counter, and its own power supply (generally in the \$35 to \$50 range). We have found that Panasonic recorders work with good results. Timex's works well and now Sears has a model out that looks identical to the Timex 2020 recorder.

Don't use a recorder from the closet that has been sitting collecting dust--it probably won't work. Have the recorder cleaned and belts replaced first before trying it. After sitting so long, the belts develop flat spots and cause an uneven speed, and dust can gum up the mechanism and cause the machine to eat your new tape. A recorder in good condition is a must.

Tone is another important factor to consider. If you have a tone control, be sure and place it in the highest position possible.

If after trying all this and it still won't load, disconnect the earphone jack and turn the volume down to a tolerable level and listen to a pre-recorded professional program. If it sounds dull and muffled, the head azimuth may be off or the heads dirty. Head azimuth is the angle of the tape data track with respect to the pickup on the head (should be parallel: zero degrees). For dirty heads, take cotton swabs and rubbing alcohol and gently clean the heads so that they appear shiney. If the heads are not dirty, the head azimuth should be adjusted.

A lot of tape recorders have a small hole right above the audio head (front center of cassette basket) which reveals a screw while in the play position. Play the tape and use a jeweler's screwdriver to turn the screw. You should hear the "muffledness" change. Adjust for the most "shrill" sound possible

(produces the most highs). If you don't have a head azimuth adjust hole, take it to a service center and have it done.

You should be able to now load without any problems. If not, play a tape and see if you hear any wavering or a stop and go type of sound. If you do, have it serviced, or buy another recorder (the motor may be going). If it sounds fine, then check all your connections, try another tape, have only the ear plug connected for loading and the mic plug connected for saving (remember, its ear to ear and mic to mic). If problems still persist, try another recorder on your computer or your recorder on another computer and ascertain which is the problem.

Once you have the loading of a prerecorded tape down, saving should also work. After you save a program, play it back with the mic plug out and make sure that something went onto the tape. If not, check your connections, and/or try another

recorder. If playback of a pre-recorded tape is fine but playback of your recorded tape is muffled, have the heads de-magnetized and cleaned.

Everything in this particular article also pertains to the 2068. Although loading problems do not occur as frequently, they still do occur with the color computer. Head azimuth is a little more critical due to the faster transfer of data. Tapes come to you with varying levels of quality and may have been recorded on a recorder with head azimuth slightly different than yours. Some hard to load tapes can be loaded by adjusting the head azimuth slightly.

SKIPPER ELECTRONICS SOFTWARE SPECIALS

TIMEX TS2068 CASSETTES

Checkbook Manager (Regular 19.95)	11.95
Math Wizardry (Regular 19.95)	11.95
Vu-File (Regular 19.95)	11.95
Budgeter (Regular 19.95)	11.95
Blind Alley (Regular 19.95)	11.95
Quadra-Chart (Regular 19.95)	11.95

TIMEX TS2068 CARTRIDGES

Casino I (Regular 29.95)	11.95
States & Capitals (Regular 29.95)	11.95
Crazybugs (Regular 29.95)	11.95

Westridge 2050 Modem	119.95
Timex TS1000/1500 16K Ram Module	14.95
Timex TS1000/1500 Program Tapes	1.00
ZX Computing Magazine	3.95
Timex Sinclair 1500/1000 Pocket Book	8.00
Fifty 1K/2K Games for the TS1500/1000	8.00
Explorer's Guide to the ZX81/TS1000	8.00
Gateway Guide to the ZX81 & ZX80	5.00

We also carry Foote Software titles

Add \$3.00 shipping for mail orders
Supplies limited/call for availability

SKIPPER ELECTRONICS
3708 Newberry Road — Gainesville, FL 32607
904/373-6796

2-BIT SOFTWARE

P.O. Box 2036, Del Mar, CA 92014

charge by phone (619) 481-3629

<input type="checkbox"/> GAMES SAMPLER	\$14.95
<input type="checkbox"/> MIND VS. MACHINE	\$14.95
<input type="checkbox"/> MAKING TREKS	\$14.95
<input type="checkbox"/> 1,2,3 GO	\$14.95
<input type="checkbox"/> MIND BOGGLERS	\$14.95
<input type="checkbox"/> TURNING THE TRUTH TABLES	\$14.95
<input type="checkbox"/> WORKING MOTHER'S DILEMMA	\$14.95
<input type="checkbox"/> SNAKE EYES	\$14.95
<input type="checkbox"/> CRAZEY MAZEY	\$14.95
<input type="checkbox"/> KEYSTROKE MANAGEMENT	\$14.95
<input type="checkbox"/> GRIDLOCK	\$14.95
<input type="checkbox"/> BASIC BASIC	\$17.95

NOW

\$5

Runs on TS1000/TS1500

4 GAMES ON EVERY CASSETTE

Name _____

Address _____

City _____

State _____

Zip _____

Acct. # _____

☐ Ck Enclosed ☐ Visa ☐ Mastercard Exp. Date _____

Finally, use a good quality tape (not the three for \$1 specials). And on the TS1000 make sure you are not trying to load a 16K program into a 2K RAM.

--Joe Williamson

NEXT MONTH: Inside the ZX/TS

Textwriter 2000 Plus — A Brief Review —

Textwriter 2000+--available for the 2040 printer at \$18.95; for the Aerco interface at \$24.95.

Bob Fingerle's TW2000+ is a menu driven word processor with word wrap for the TS2068. The menu consists of seven items:

1. initialize colors
2. load a file
3. start a new file
4. save a file
5. display file
6. printing single space
7. printing double space

Most of the items are self explanatory. #1 allows you to set paper and ink colors on your screen. #6 & #7 helps format your text for your printer. The Aerco interface which I am using lets you use either the 2040 or an 80 column printer.

To me the most important feature is the "Goof" command. If you accidentally BREAK, then you type GOTO 9000 and your menu and text returns. Type #5 on the menu, the line number you wish and continue typing as if nothing had happened.

TW2000+ in EDIT mode will center text, add spaces, lines or single characters, move blocks of type, delete text, or repeat blocks of type as many times as needed.

Here is a shopping list of what I would like to see added to this good program: right justification, imbedding of printer commands, renaming (so you can use all or part of a text under a different name), 64 columns on the screen, and a means of adding characters easily without overtyping your text (now

you must add your spaces manually).

In conclusion the TW2000+ is the most user-friendly word processor for the money for the TS2068. I have been using mine for six months, driving a Spirit 80 printer, to produce articles, letters, etc.

-- Bill Woodward
Bob Fingerle, 39639 Embarcadero,
Fremont, CA 94538.

A FULL TEST OF TW2000+ WILL APPEAR
IN THE OCTOBER ISSUE OF S.U.M.

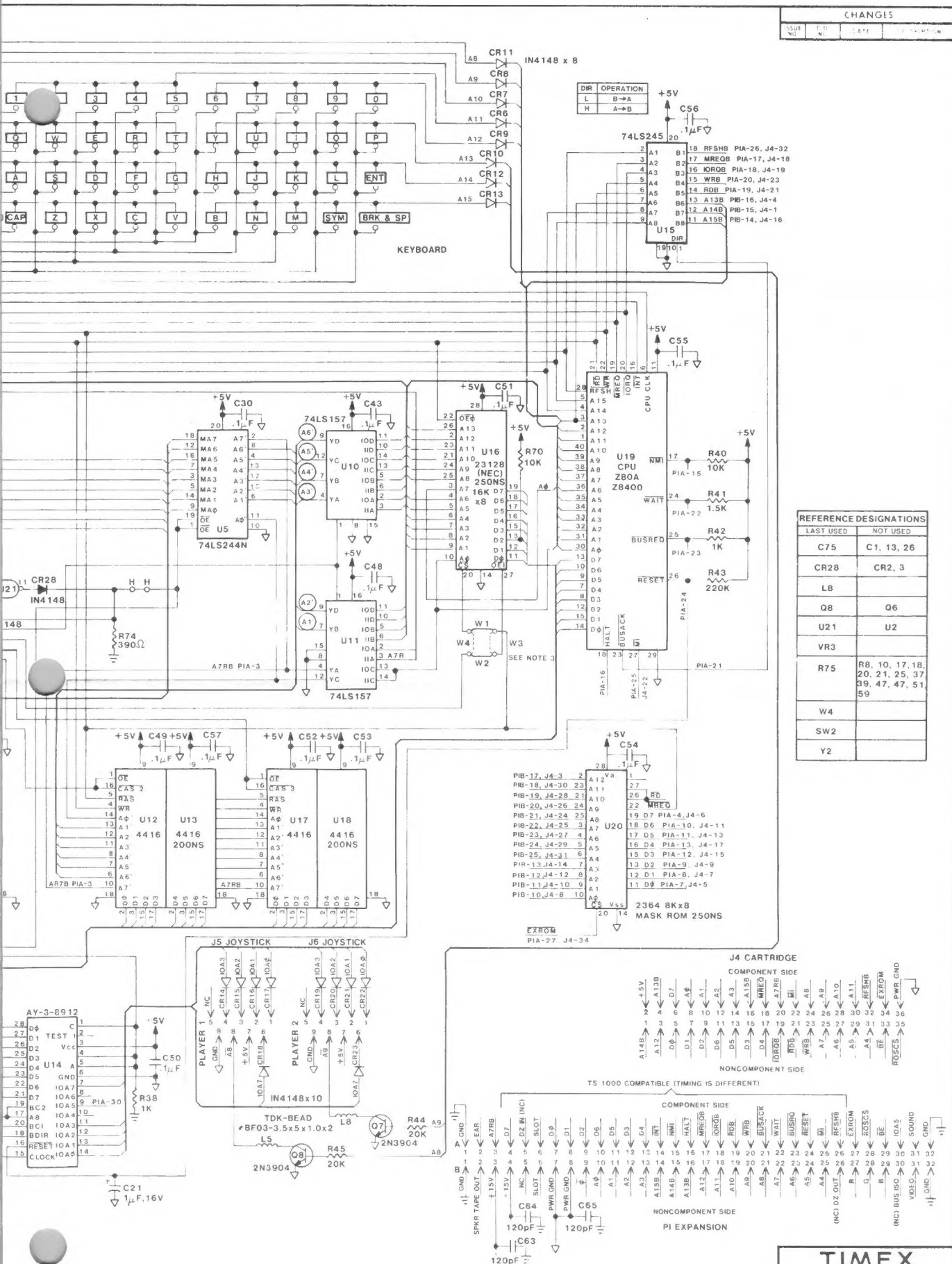
Users Group News

In this column, we will list the regional user groups in Florida. If you have a users group here, please drop us a line so we can include your meeting times and highlights of your last meeting.

TUG: Gainesville, FL. Meets the third Wednesday of each month at 3708 Newberry Rd (State Road 26) Gainesville, FL 32607. Call Bill at (904) 373-6796 for details. Facilities are provided to bring your system and show it off.

LAST MEETING: On display was the TMK color monitor/TV combination. We compared its picture quality to a BMC green screen monitor which K-Mart was selling for \$85.00. Both monitors had very clear displays with the monochrome having the edge. The color made the other more desirable though. We also had an Olivetti ink jet printer connected to a 2068 with an Aerco interface. The printer is lightning fast and very quiet. A catalog mail order service known as DAK was selling these printers off at \$200 a shot. A very good deal. Richard Cravy showed off his new program called "Horace Goes Skiing", one of three available in the Horace series.

NEXT MEETING: Our next meeting will be the 2nd anniversary of our Timex Users Group. We are all expecting to have a good time.



REFERENCE DESIGNATIONS	
LAST USED	NOT USED
C75	C1, 13, 26
CR28	CR2, 3
L8	
Q8	Q6
U21	U2
VR3	
R75	R8, 10, 17, 18, 20, 21, 25, 37, 39, 47, 47, 51, 59
W4	
SW2	
Y2	

TIMEX	
COMPUTER CORPORATION WATERBURY, CONNECTICUT 06720	
NAME	TS2000 SYSTEM SCHEMATIC DIAGRAM
DWG NO	335-870500

THIS PRINT AND THE INFORMATION IT CONTAINS ARE THE PROPERTY OF TIMEX CORPORATION. THE PRINT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM. THE INFORMATION IN THIS PRINT IS FOR A LIMITED PURPOSE AND IS NOT TO BE USED FOR ANY OTHER PURPOSE.

MATERIAL		DO NOT SCALE DRAWING	
SPEC		CHK	DWA N PARSONS
SIZE & TOL		REV	DATE FEB 84
TEMPER		FIRST	DATE FEB 84
PRO. SPEC		SCALE	NONE
		REVISION	NO. 1

Expanding UDG's

Have you thought that when you wanted to print a pattern using user defined graphics on the screen that you were limited to placing that pattern on the screen in multiples of the pixel dimensions (8x8) of the character? True in the horizontal, but in the vertical dimension, the tyranny of the character can be overcome as illustrated by this little program called "EXP II".

EXP II pokes the value of the UDG start address for the user defined graphics table. The program scrolls the pixel patterns of the USR graphics. By printing characters that are next to each other in the character set on top of each other on the screen, the graphic character changes position a pixel at a time. This allows smoother movement of graphics on the screen.

The graphic character can be any number of characters high. For a pattern that is more than one character in width, a buffer or blank character is placed between the series of characters that are printed on top of each other. Notice the setup of the characters in EXP II. The small duplicate listing is to show which UDG characters are used in the print statements. This was made by listing line 8200 and then in direct mode, print to the screen and then COPY.

I hope that you find EXP's principle useful in developing your own moving graphics programs. This one had me scratching my head for days, but every time I thought about it, it became more beautiful.

One other thing this opens up is that you can also have more than one user defined character set. The UDG's initialize at memory location 65368 and occupy 168 bytes (21x8). Another set could be stored 168 bytes below this starting at 65201. These starting addresses are stored at 23675 and 23676. Initially 23675 holds 88 and 23676 holds 255 (255*256+88=65368) for starting address

65201, POKE 23675 with 177 and 23676 with 254 (254*256+177=65201). To utilize this, all you have to do is keep track of which UDG set you are working with when defining the sets and when you print them. You can make as many UDG sets as you have memory for.

--John Monkus

```
8200>PRINT AT 6,16: OVER 1;"ADG"
      AT 7,16;"BEH": IF Y<65359 THEN
PRINT AT 6,19: OVER 1;"J":AT 7,1
9;"K"
8210 IF Y<65368 AND Y>65335 THEN
PRINT AT 8,16: OVER 1;"CFI"
8220 IF Y<65356 AND Y>65335 THEN
PRINT AT 8,19: OVER 1;"L"
8230 RETURN
```

These lines are to be entered first since they identify which characters are UDGs in their graphics mode.

```
10 REM EXP II
20 REM 8-27-84 BY J. Monkus
3000 BEEP .25,16
3000 STOP
3000 CLS
3010 LET X=0: LET Y=65368+X: GO
SUB 9550: GO SUB 8200
3040 PRINT AT 6,14: OVER 1;"X"
      AT 7,14:"X"
3050 IF INKEY$="D" THEN GO SUB 8
200: LET X=-1: GO SUB 9550: GO S
UB 8200
3070 IF INKEY$="U" THEN GO SUB 8
200: LET X=1: GO SUB 9550: GO S
UB 8200
3080 IF INKEY$="9" THEN GO TO 99
0
3090 PRINT AT 20,6:"X Y Z A B C D
E F G H I J K L M N O P Q R S T U
V W X Y Z A B C D E F G H I J K L
M N O P Q R S T U"
3100 GO TO 8050
8200 PRINT AT 6,16: OVER 1;"ADG"
      AT 7,16;"BEH": IF Y<65359 THEN
PRINT AT 6,19: OVER 1;"J":AT 7,1
9;"K"
8210 IF Y<65368 AND Y>65335 THEN
PRINT AT 8,16: OVER 1;"CFI"
8220 IF Y<65356 AND Y>65335 THEN
PRINT AT 8,19: OVER 1;"L"
8230 RETURN
8000 STOP
9000 POKE 23658,8: RESTORE
9010 FOR J=144 TO 154: FOR I=0 T
O 7: READ O: POKE USR CHR$ J+I,C
: NEXT I: NEXT J
9018 DATA 0,0,0,0,1,2,4,8
9020 DATA 8,12,16,9,4,2,1,0
9024 DATA 0,0,0,0,0,0,0,0
9028 DATA 0,0,0,0,BIN 00111100,BIN
11000011,0,0,0
9030 DATA 0,0,0,0,BIN 11000011,BIN
00111100,0,BIN 11000011,BIN 001
11100
9032 DATA 0,0,0,0,0,0,0,0
9034 DATA 0,0,0,0,128,64,32,16
9036 DATA 16,48,80,144,32,64,128
,0
9038 DATA 0,0,0,0,0,0,0,0
9040 DATA 0,0,0,0,0,0,0,0
9042 DATA 0,0,0,0,0,0,0,0
9498 GO TO 8000
```

```

9550 PRINT PEEK 23675+256*PEEK 2
9560 STOP
9570 LET Y=Y+X: POKE 23675,Y-256
*INT (Y/256): POKE 23676,INT (Y/
256)
9570 RETURN
9580 STOP
9590 SAVE "EXP II" LINE 9000: VE
RIFY "EXP II"

```



This should appear on your screen when the program begins to run. This also allows you to see that, when entering the program, Graphic A/Graphic D/Graphic G yields the little design reproduced on line 8040 of the program.

Horace...At Last!

A common complaint in the microcomputer field is that those who make the hardware don't know how to write the software. This adage has largely been confirmed by Timex, whose software for the 1000/1500 series seldom came up to the same quality level as packages from independent suppliers. This same problem has also been evident with the 2068 software.

But at last I have gotten my hands on three programs that really can make you glad you left your Atari 2600 behind. They are the "Horace" games Timex made available for the 2068 shortly before they left the market but which many dealers never stocked. I was able to purchase mine from Games To Learn By (address at end of article) at very reasonable prices.

Horace, long popular with Spectrum owners in England, is almost unknown here. Horace somewhat resembles one of the ghosts in the Pac-Man game with legs. But the programmers have done far more with him than the ghosts have ever done.

HUNGRY HORACE apparently is the oldest of the three games and is the simplest. It operates much like Pac-Man but has more challenge than the other 2068 maze type games I've

seen. It's entertaining but is not my favorite. However, my 3 children (ages 13, 11, & 9) play it the most.

HORACE GOES SKIING opens with a screen in which Horace must cross an 8 lane busy freeway to rent his skis and then return. This is similar to part of the popular Frogger arcade game. After procuring his skis, he begins to ski, avoiding trees which will break his skis (requiring another trip across the freeway) and trying to slalom back and forth through the flags to score points.



If he can pass under the finish banner at the bottom he scores additional points. Finishing one slope means crossing the freeway again to get to the next slope. This is my favorite. The sound, movement, graphics detail and sheer challenge are great. I brought this one along to our last users group meeting and everyone was taken with it!

HORACE AND THE SPIDERS is the most complicated and most challenging. Three screens are presented. In the first Horace must cross a large open space while jumping over a spider and then climbing a small hill. This immediately switches Horace to a scene in which he must cross a canyon by swinging from one spider web rope to another while the spiders overhead are busily pulling the ropes up (here's where I fail). Crossing the canyon he enters a black forest with spiders and webs everywhere. Horace is to set about stomping holes in the webs and then pouncing on the spiders which come to repair them. They are destroyed if he can step on them and make them fall through the holes to the ground below. Since I have never gotten past this part, I'm not sure what comes next. Again, great graphics

and sound with a refreshing change in theme from the Pac-Man and Space Invaders fare.

Though I primarily use my 2068 for its educational value and for word processing, Horace does have his place at my home. Buy at least one and see if you don't agree.

-- Richard Cravy

VENDOR REPORTS

There are a number of reasons for the existence of magazines and newsletters supporting specific computer brands such as the Timex/Sinclair machines. One of the major reasons, from my point of view, is the interface such publications provide between users of the computers and those companies which produce hardware or software for the machines. We want to provide such a service through the pages of SUM by providing space for advertisers to promote their products and by providing columns which review products. In addition we are instituting this column, GOTO, as a place where brief mention can be made of products and suppliers which you, as readers, may contact for more information.

Be considerate and try to enclose at least a stamp or two when requesting a catalog. Some suppliers are reporting sending out up to 100 catalogs or fliers for each 1 sale they make. Let's help them out by paying our own way.

FAST LOADING FOR TS1000 and TS1500 is provided by the stringy floppy drive available from A & J Micro-drive. Designed just for the smaller Timex computers, the unit loads up to 30 times faster than a regular cassette tape recorder, is highly reliable and stores up to 127 files and 70K per tape. A starter kit is \$169.50 + shipping. A & J Micro-drive, 1050 "I" East Duane Avenue, Sunnyvale, CA 94086. 408/732-9292.

ORIGINAL TIMEX HARDWARE/SOFTWARE is available at discount prices from

GAMES TO LEARN BY. Their catalog lists Timex computers, games, and other Timex software as well as various utilities and other products available for the Timex machines. Marty Warner-Dubay is a former employee of Timex's software development department; she received her pink slip the same day Timex got out of the business. Games To Learn By, P.O. Box 78, Collinsville, CT 06022. 203/673-7089.

FILING SYSTEM and database management is available from Thomas Woods. ZX Pro/file (for 1000/1500) and Pro/file 2068 are considered by many

FOOTE SOFTWARE

NEW! BADGAMMON 2068 Full color and sound. 2068 version of the popular Backgammon game. \$19.95

	2068	1000/1500
USA	\$15.95	\$11.95
(Presidents and States & Caps.)		
Calorie Counter	16.95	12.95
Advanced Math	14.95	9.95
(Calculus)		
Fun & Games	n.a.	7.95
(Tic-Tac-Toe & Hangman)		

Note: 2068 versions are more than just "uploads", but are remakes containing full color and sound.

SPECTRUM ROM.....only \$20.00
Lets your TS2068 run Spectrum software. Just swap out ROMs or build the "Spectremulator" as described in the August issue of SUM.

Add \$1 for shipping and handling.

FOOTE SOFTWARE
PO BOX 14655
GAINESVILLE, FL 32604-4655
(904) 462-1086 6-9PM EST

LOOK FOR OUR PRODUCTS AT
SKIPPER ELECTRONICS.

to be the premier filing systems for the Timex machines and come with extensive manuals. Prices are currently \$16.95 & \$29.95 respectively. Thomas B. Woods, P. O. Box 64, Jefferson, NH 03583. 603/586-7734.

\$18.88 ZX81s -- BNF Enterprises have operational and functioning ZX81s for \$18.88 each or 6 for \$89.88. No manual, power supply, cables at this price. Contact them at 119 Foster Street, Peabody, MA 01961; 617/531-5774.

CLASSIFIED ADS

Two TS 1000's, Memotech 64K & HRG, EZ Key keyboard, 2040 printer with paper, 12 inch B/W TV, cassette recorder with spare tapes. Complete System for only \$200. Dr. Charles Lambert 904-372-5215.

Wanted: TS 2040 printer. Bring to next meeting or contact Al Mollitor at 3814 NW 9 Ave Gainesville, FL 32601. Also interested in swapping or selling software. Bring to next meeting.

SINCLAIR/TIMEX USERS MAGAZINE

c/o 3224 NW 30th Avenue
Gainesville, Florida 32605

W M J Data Systems

TS1000/ZX81 SOFTWARE

The following programs all use a machine code generated spreadsheet format that makes them fast and reliable. It is suggested that a printer be used with the programs, but one is not required. All programs require 16K.

TAX RETURN ORGANIZER \$18.00

This package of four programs helps the individual tax payer organize his or her tax records. This package can be used year after since it does not follow the ever changing tax forms. The programs ask questions which can be answered by referring to W-2 forms, interest statements, etc. Hardcopy should be kept as tax records.

CHECKREC \$10.00

This program can be used to keep track of all checking account transactions. The program will automatically reconcile the account to the bank statement. This program can also be used for savings accounts.

STOCK WATCH \$10.00

This program keeps track of all stock transactions including broker's fees.

APPOINTMENT WATCH \$10.00

This program keeps track of all your appointments.

ADDRESS BOOK \$10.00

Keep track of all your important names, addresses, and telephone numbers. Mailing labels may be cut out of printout.

HOUSEHOLD INVENTORY \$10.00

Maintain a listing of all your personal belongings. Keep track of all important data; serial numbers, original cost, dates, etc.

TEXTWRITER 1000 by Robert Fingerle \$11.95

Rated A+ in SYNC Jan/Feb 1984 issue. The best word processing package we have found for the TS1000 with a 32 column printer.

TS1000 SUPER TAPE by J. R. Coffey \$24.95

Rated 4 out of 4 by the Triangle Sinclair User's Group, April 1984 issue! 45 programs on one tape.

**all programs recorded on cassette with full instructions. All prices include postage. NY residents add sales tax. Check or money order payable to WMJ DATA SYSTEMS.

DEDUCT 10% ON PURCHASE
OF 2 OR MORE SOFTWARE
PACKAGES.

USER GROUP MEMBERS
DEDUCT 10%.

4 BUTTERFLY DRIVE

HAUPPAUGE, NEW YORK 11788



CLACKAMAS TS USERS 1084
C/O ROBERT EVANS 1163
2615 SE COURTNEY RD #19
MILWAUKEE, OR 98222